

Work Order ID 53773

November 18, 2009 8:40:52 AM



Page 1

Item ID:	D2891-1	Accept		Setup	Start	
Revision ID:	A1				Stop	
Item Name:	2.25 Support					
Start Date:	11/11/2009	Start Qty: 20.00		Cust Item ID:		
Required Date:	30/12/2009	Req'd Qty: 20.00		Customer:		
Reference:						

Approvals:	Process Plan:		Date:	09-11-11	Tooling:		Date:		Run	Start	
	QC:		Date:		SPC (Y/N):		Date:			Stop	

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
D2891	Rev A1

100		0.00							
	HAAS CNC VERTICAL MACHINING #1								
HAAS 1	Memo	0.00							
HAAS CNC vertical machine #1	Machine as per Folio FA046 Tumble & Deburr								

H.A 09/12/10

110	QC2- Inspect parts off machine FAI/FAIB	0.00							
QC	Memo	0.00							
Quality Control									

H.A 09/12/10
Ref 09.12.13

(20)

120	QC8- Inspect parts - second check	0.00							
QC	Memo	0.00							
Quality Control									

SP 09/12/17

(20)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 53773

November 18, 2009 8:40:52 AM



Page 2

Item ID:	D2891-1	Accept		Setup	Start	
Revision ID:	A1				Stop	
Item Name:	2.25 Support					
Start Date:	18/11/2009	Start Qty:	20.00	Cust Item ID:		
Required Date:	30/12/2009	Req'd Qty:	20.00	Customer:		
Reference:						

Approvals:	Process Plan:	Date:	Tooling:	Date:	Run	Start	
	QC:	Date:	SPC (Y/N):	Date:		Stop	

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130 Powdercoat Powder Coating	White Gloss(Ref:4.3.5.2) per QSI005 4.3-Steel <i>M 113170.</i> Memo START TIME: <i>2:10</i> <i>4:00</i> <input type="checkbox"/> FINISH TIME: <i>2:10</i> <input type="checkbox"/> OVEN TEMPERATURE: <i>BR09-12-21.</i>	0.00 0.00				<i>(20)</i>			
140 QC Quality Control	QC3- Inspect Part Finish Memo	0.00 0.00				<i>(120)</i>	<i>Ø</i>		
150 Packaging Packaging	Identify as per dwg & Stock Location: <i>X-Tubes</i> <i>(Paint)</i> Memo	0.00 0.00				<i>m/l</i>	<i>10 / 02 / 09</i>	<i>(20)</i>	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

November 18, 2009 8:40:52 AM



Accept

**Setup Start**

Stop

**Cust Item ID:**[illegible]

1. The first step in the process is to identify the problem. This involves gathering information about the situation and understanding the needs of the stakeholders involved.

Customer:

Reference:

Run Start



Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Operation	Description
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Set Up/ Run Hours

**Draw
Number**

Draw
Rev.

**Plan
Code**

Accept
Qty

Reject
QtyReject
Number

**Insp.
Stamp**

160

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

10/02/09 *[Signature]*

MF 10-2-9

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

November 18, 2009 8:41:01 AM

Page 1

Work Order ID: 53773

Parent Item: D2891-1RevA1

Parent Item Name: 2.25 Support

Comments:

Start Date: 18/11/2009

Required Date: 30/12/2009

Start Qty: 20.00

Required Qty: 20.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
DSK076RevA		Manufactured	No			110	Each	20.0000	10.0000			

D2891-1 TURNING DETAIL

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
<u>Location</u>		
Main Warehouse		
MAT	20	
42244	1	
43384	4	
51184	5	
52266	10	

1
5
4

H.A 09/12/10

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD		Work Order:	53773
Description: Ø2.250 Support		Part Number:	D2891-1
Inspection Dwg: D2891	Rev: A1	Page 1 of 1	

FIRST ARTICLE INSPECTION DIMENSION SHEET

☒ **First Article**
☐ **Prototype**

				Record Actual Dimensions				
Dim	Min	Max	Go/No Go Gauge	1	2	3	4	5
HAAS Section								
AA	0.188	0.193		0.190	0.190	0.190	0.190	0.190
AB	0.240	0.260		0.249	0.249	0.249	0.248	0.248
AC	0.115	0.150		0.125	0.125	0.125	0.125	0.125
AD	0.040	0.060		0.048	0.053	0.055	0.054	0.054
AE	0.010	0.020		0.010	0.010	0.010	0.010	0.010
AF	0.240	0.260		0.250	0.250	0.250	0.250	0.250
AG	0.290	0.310		0.298	0.300	0.298	0.301	0.300
AH	0.115	0.150		0.137	0.137	0.137	0.137	0.137
AI	0.454	0.474		0.464	0.467	0.461	0.460	0.461
AJ	2.779	2.789		2.784	2.784	2.784	2.784	2.784
AK	0.240	0.260		0.250	0.250	0.250	0.250	0.250
AL	1.002	1.042		1.039	1.039	1.042	1.038	1.042
AM	0.053	0.073		0.063	0.063	0.063	0.063	0.063
AN	0.257	0.262		0.258	0.258	0.258	0.258	0.258
AO	1.663	1.683		1.673	1.676	1.675	1.672	1.673
AP	0.053	0.073		0.063	0.063	0.063	0.063	0.063
AQ	0.022	0.042		0.032	0.032	0.032	0.032	0.032
AR								
AS								
AT								
Accept/Reject								

Measured by: H.A. **Date:** 09/12/10

Audited by: LA **Date:** 09/12/17

Prototype Approval: **Date:**

Rev	Date	Change	Revised by	Approved
A	02.12.12	New Issue	KJ/RF	
B	08.04.21	Reformat	KJ/JLM	

DART AEROSPACE LTD		Work Order:	53773
Description: Ø2.250 Support		Part Number:	D2891-1
Inspection Dwg: D2891	Rev: A1	Page 1 of 1	

FIRST ARTICLE INSPECTION DIMENSION SHEET

☒ First Article ☐ Prototype

				Record Actual Dimensions				
Dim	Min	Max	Go/No Go Gauge	6	7	8	9	10
HAAS Section								
AA	0.188	0.193		0.190	0.190	0.190	0.190	0.190
AB	0.240	0.260		0.247	0.247	0.249	0.248	0.249
AC	0.115	0.150		0.125	0.125	0.125	0.125	0.125
AD	0.040	0.060		0.055	0.053	0.055	0.054	0.055
AE	0.010	0.020		0.010	0.010	0.010	0.010	0.010
AF	0.240	0.260		0.250	0.250	0.250	0.250	0.250
AG	0.290	0.310		0.300	0.300	0.300	0.300	0.300
AH	0.115	0.150		0.137	0.137	0.137	0.137	0.137
AI	0.454	0.474		0.459	0.460	0.460	0.459	0.459
AJ	2.779	2.789		2.784	2.784	2.784	2.784	2.784
AK	0.240	0.260		0.250	0.250	0.250	0.250	0.250
AL	1.002	1.042		1.038	1.033	1.038	1.039	1.036
AM	0.053	0.073		0.063	0.063	0.063	0.063	0.063
AN	0.257	0.262		0.258	0.258	0.258	0.258	0.258
AO	1.663	1.683		1.673	1.674	1.674	1.673	1.673
AP	0.053	0.073		0.063	0.063	0.063	0.063	0.063
AQ	0.022	0.042		0.032	0.032	0.032	0.032	0.032
AR								
AS								
AT								
Accept/Reject								

Measured by: H.A. Date: 09/12/10

Audited by: SP Date: 09/12/11

Prototype Approval: Date:

Rev	Date	Change	Revised by	Approved
A	02.12.12	New Issue	KJ/RF	
B	08.04.21	Reformat	KJ/JLM	

DART AEROSPACE LTD		Work Order: 53773
Description: Ø2.250 Support		Part Number: D2891-1
Inspection Dwg: D2891	Rev: A1	Page 3 of 4

FIRST ARTICLE INSPECTION DIMENSION SHEET

☒ First Article ☐ Prototype

				Record Actual Dimensions				
Dim	Min	Max	Go/No Go Gauge	1	2	3	4	5
HAAS Section								
AA	0.188	0.193		0.190	0.190	0.190	0.190	0.190
AB	0.240	0.260		0.247	0.247	0.249	0.249	0.249
AC	0.115	0.150		0.125	0.125	0.125	0.125	0.125
AD	0.040	0.060		0.056	0.055	0.054	0.054	0.054
AE	0.010	0.020		0.010	0.010	0.010	0.010	0.010
AF	0.240	0.260		0.250	0.250	0.250	0.250	0.250
AG	0.290	0.310		0.300	0.300	0.300	0.300	0.300
AH	0.115	0.150		0.137	0.137	0.137	0.137	0.137
AI	0.454	0.474		0.457	0.461	0.458	0.459	0.459
AJ	2.779	2.789		2.784	2.784	2.784	2.784	2.784
AK	0.240	0.260		0.250	0.250	0.250	0.250	0.250
AL	1.002	1.042		1.034	1.038	1.038	1.038	1.040
AM	0.053	0.073		0.063	0.063	0.063	0.063	0.063
AN	0.257	0.262		0.258	0.258	0.258	0.258	0.258
AO	1.663	1.683		1.673	1.673	1.675	1.674	1.675
AP	0.053	0.073		0.063	0.063	0.063	0.063	0.063
AQ	0.022	0.042		0.032	0.032	0.032	0.032	0.032
AR								
AS								
AT								
Accept/Reject								

Measured by: K.A. Date: 09/12/11

Audited by: AS Date: 09/14/11

Prototype Approval: Date:

Rev	Date	Change	Revised by	Approved
A	02.12.12	New Issue	KJ/RF	
B	08.04.21	Reformat	KJ/JLM	

DART AEROSPACE LTD		Work Order:	53773
Description: Ø2.250 Support		Part Number:	D2891-1
Inspection Dwg: D2891	Rev: A1	Page 4 of 4	

FIRST ARTICLE INSPECTION DIMENSION SHEET

☒ First Article ☐ Prototype

				Record Actual Dimensions				
Dim	Min	Max	Go/No Go Gauge	16	17	18	19	20
HAAS Section								
AA	0.188	0.193		.188	.188	.188	.188	.188
AB	0.240	0.260		.250	.250	.250	.250	.250
AC	0.115	0.150		.126	.126	.126	.126	.126
AD	0.040	0.060		.050	.050	.050	.050	.050
AE	0.010	0.020		.015	.015	.015	.015	.015
AF	0.240	0.260		.250	.250	.250	.250	.250
AG	0.290	0.310		.310	.310	.310	.310	.310
AH	0.115	0.150		.140	.140	.140	.140	.140
AI	0.454	0.474		.464	.464	.464	.464	.464
AJ	2.779	2.789		2.785	2.785	2.785	2.785	2.785
AK	0.240	0.260		.250	.250	.250	.250	.250
AL	1.002	1.042		1.040	1.040	1.040	1.040	1.040
AM	0.053	0.073		.063	.063	.063	.063	.063
AN	0.257	0.262		.257	.257	.257	.257	.257
AO	1.663	1.683		1.675	1.675	1.675	1.675	1.675
AP	0.053	0.073		.063	.063	.063	.063	.063
AQ	0.022	0.042		.032	.032	.032	.032	.032
AR								
AS								
AT								
Accept/Reject								

Measured by: *[Signature]* Date: 09.12.14

Audited by: *[Signature]* Date: 09/12/17

Prototype Approval: _____ Date: _____

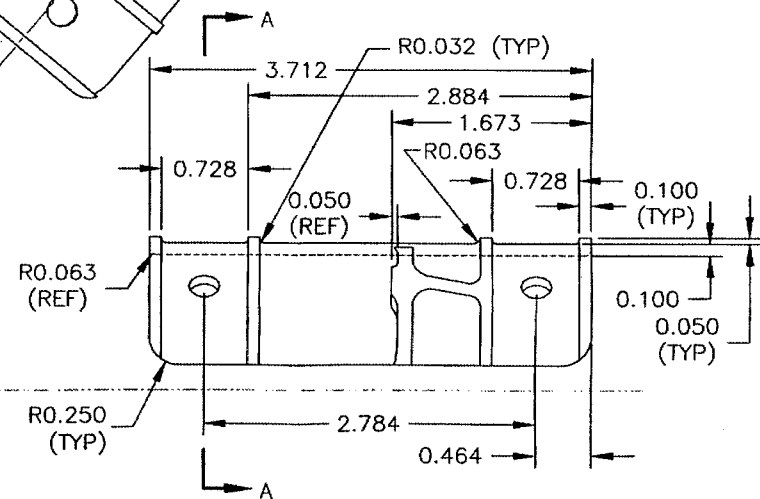
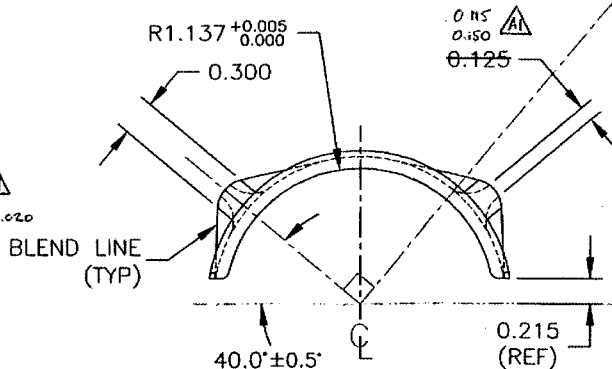
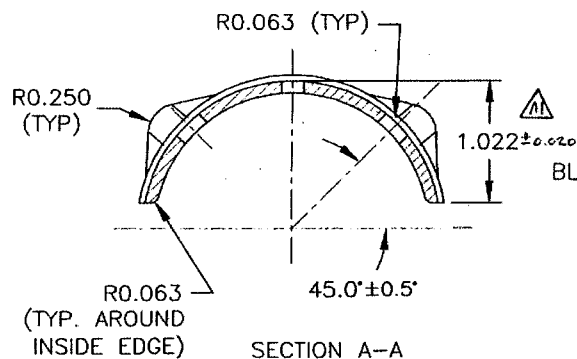
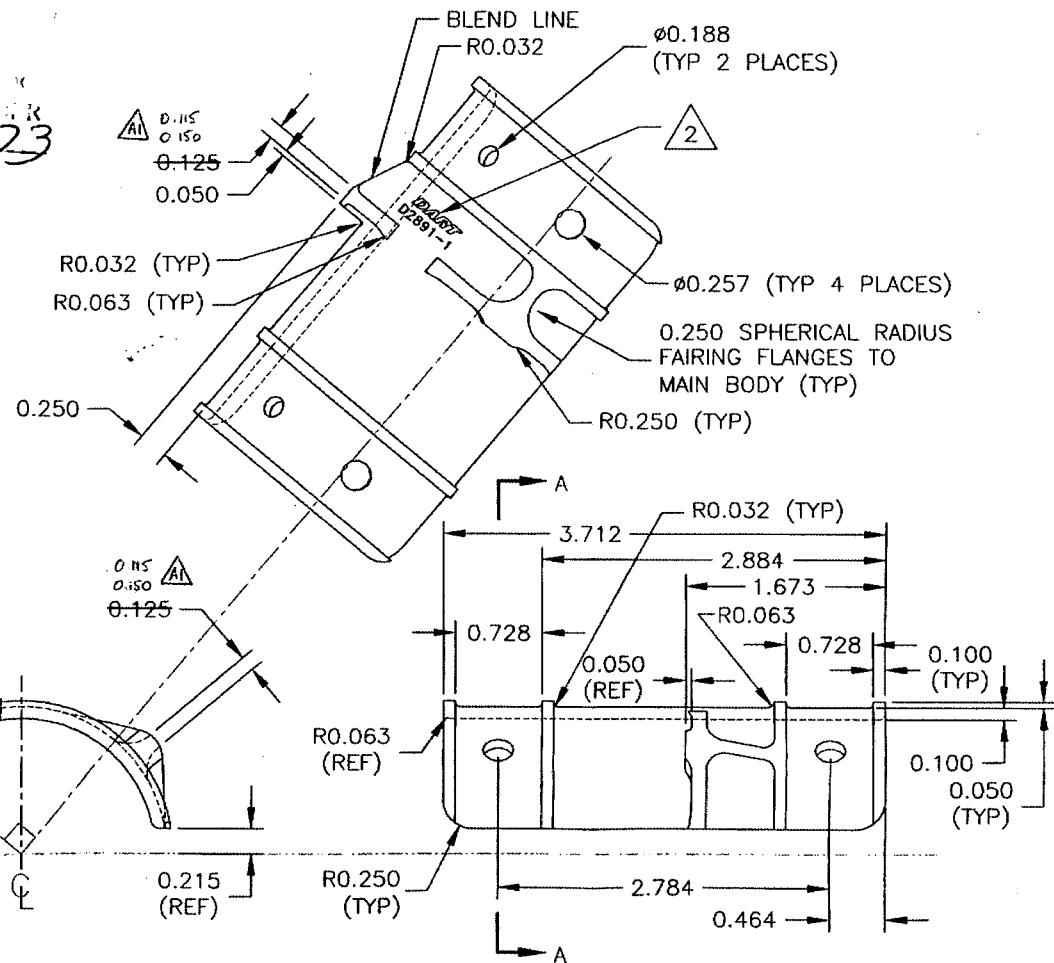
Rev	Date	Change	Revised by	Approved
A	02.12.12	New Issue	KJ/RF	
B	08.04.21	Reformat	KJ/JLM	<i>[Signature]</i>

D2891-1

- 1) MATERIAL: 17-4 PH STAINLESS STEEL
HEAT TREAT TO H900 CONDITION
(900°F FOR 1 HR, AIR COOL)
MIN UTS = 170 KSI (38 HRC)
- 2) IDENTIFY WITH DART LOGO (PER DART SUPPLIED GRAPHIC) AND PART NUMBER IN THIS AREA WITH 0.125 HIGH LETTERING 0.010-0.020 DEEP.
- 3) BREAK ALL UNMARKED SHARP EDGES 0.010 TO 0.020
- 4) PART IS SYMMETRIC ABOUT CENTERLINE
- 5) TOLERANCES ARE PER DART QSI 018 (REF. X.XXX = ± 0.010) UNLESS OTHERWISE NOTED
- 6) ALL DIMENSIONS ARE IN INCHES
- 7) FINISH: POWDER COAT WHITE (REF. 4.3.5.2) PER DART QSI 005 4.3

UNCONTROLLED
SUBJECT TO

WORK ORDER NO. **53223**



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AI	02.01.23	UPDATE DIMS AS MANUFACTURED
A	00.11.17	NEW ISSUE
DESIGN	CP	DRAWN BY CP
CHECKED	CP	APPROVED CP
DATE	00.11.17	DRAWING NO. D2891
		TITLE #2.250 SUPPORT
		DART AEROSPACE LTD. HARRISBURY, ONTARIO, CANADA
		REV. A SHEET 1 OF 1
		SCALE 1:1